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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,254	07/29/2003	Yunxin Wu	13768.426	6705
47973	7590	09/06/2006	EXAMINER	
WORKMAN NYDEGGER/MICROSOFT 1000 EAGLE GATE TOWER 60 EAST SOUTH TEMPLE SALT LAKE CITY, UT 84111			GORTAYO, DANGELINO N	
			ART UNIT	PAPER NUMBER
			2168	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/629,254	WU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dangelino N. Gortayo	2168	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-35 and 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-35 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 25-35 and 42 are pending.
2. The amended claims 25-35 and 42 filed 6/19/2006 have been accepted for examination.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 25-35 and 42 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

4. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Claims 26, 28, and 31 refer to a claim 42, which does not precede said claims, referring to a claim that is not yet presented at the time the claims are presented. Please amend the claims to properly depend on claims preceding it. For purposes of examination, any references to the claims depending on a later presented claim is ignored.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 25, 26, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "substantially" in claims 25, 26, and 42 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 25-35 and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Multer et al. (US Patent 7,007,041 B2)

As per claim 25, Multer teaches "In a computer network comprised of different types of platforms for storing replicas of the same data," (Figure 7 and column 8 lines

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22-28, wherein information is shared between a plurality of devices) “and wherein the limitations or features of a particular platform may require the data of a replica to be stored in a different physical arrangement at the data store layer of the particular platform,” (column 9 line 51 – column 10 line 23, wherein different types of devices mean different ways to store data) “and wherein when synchronizing the replicas the data for each replica must be mapped from the different physical arrangement at each platform into a logical view table of a synchronization layer of the particular platform that is substantially similar to the logical view table at each of the other different types of platforms,” (column 12 lines 36-46, wherein data from different devices are converted to a universal data format) “a method for mapping of the physical layout of items in a data store layer of a platform to a logical view in a synchronization layer of the platform,” (see Abstract)

“the method comprising: an act of compiling at the computer system of a particular platform a logical schema into a catalog that can be used to define a logical view that is substantially the same for each platform and that includes a logical grouping of data items by defining the data items in terms of,” (Figure 11, 12, 13 and column 37 lines 44-58, wherein a universal data format for objects is shown defining logical views)

“a charge unit that defines the granularity of a group of data items in the sense that if any part of the group of data items is modified, the entire group of data items will be synchronized when synchronizing other replicas,” (column 38 lines 10-23, wherein objects are divided into folders and supported in a data pack that is modified)

“and a consistency unit, defining the minimum group of data items that must be reported during synchronization if any item of the group is changed;” (column 39 lines 9-19, wherein all data packs have a header showing basic content information)

“and an act of utilizing the catalog to map items from a physical layout to the logical view that is substantially similar to the logical view at different platforms of one or more other computer systems.” (column 16 lines 33-50)

As per claim 26, Multer teaches “a replica is stored includes in the synchronization layer of the computer system a logical schema that is compiled into a catalog that can be used to define a logical view that is substantially the same for each platform.” (column 16 line 60 – column 17 line 3)

As per claim 28, Multer teaches “the physical arrangement at the data store layer of the platform for each computing system at which a replica is stored is defined by one or more physical tables for storing the data of the replica.” (column 19 lines 17-22)

As per claim 29, Multer teaches “the physical arrangement defined by the physical tables of at least one of the computer systems is different from the physical arrangement defined by the physical tables of the other computer systems” (column 10 lines 19-26)

As per claim 30, Multer teaches “the data store layer of each platform of each computer system where a replica is stored includes a user interface that includes procedures or function code, the procedures or function code being adapted to arrange

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the data for the replica in the physical tables of the data store layer" (column 17 lines 47-56)

As per claim 31, Multer teaches "the data store layer of the platform for each computer system at which a replica is stored includes one or more folders in which items grouped in a common folder can be synchronized, thereby defining the scope of synchronization between synchronization layers of different platforms," (column 27 lines 34-41) "and wherein the items grouped in a common folder that can be synchronized are less than all of the items stored for a replica" (column 37 lines 7-20, wherein data packages can be modified on the binary data level)

As per claim 32, Multer teaches "an act of storing a local change tracker in the one or more physical tables at the data store layer of each platform, the local change tracker maintaining local change enumerations for items stored in the data store layer of a platform;" (column 7 lines 12-24, wherein a device includes a differencing synchronizer that tracks changes)

"an act of storing a synchronization change tracker in the logical view table at the synchronization layer of each platform, the synchronization change tracker maintaining versions and synchronization local change enumerations for the items stored in the synchronization layer of a platform;" (column 6 lines 37-53)

"and wherein by comparing the local change tracker with the synchronization local change tracker, the computer system of each platform can determine if an item stored in the data store layer of the computer system should be sent and thus mapped



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to the logical view in the synchronization layer of the computer system.” (column 11 lines 12-21)

As per claim 33, Multer teaches “if the local change enumeration and the synchronization local change enumeration comprise different values, then the item stored in the data store layer of the computer system should be mapped to the logical view.” (column 11 lines 12-27)

As per claim 34, Multer teaches “if the local change enumeration and the synchronization local change enumeration comprise the same value, then the item stored in the data store layer of the computer system does not need to be mapped to the logical view.” (column 11 lines 45-55, wherein only difference information is mapped and processed)

As per claim 35, Multer teaches “a change in an item of data for a replica stored at a particular platform caused by a different version of the replica created by a computer system of another platform is identified by a ID that corresponds to the computer system of the other platform,” (column 12 lines 63-66)

“and wherein a change in an item of data for a replica stored at a particular platform caused a change created in the one or more physical tables of the data store of the particular platform is identified by a change enumerations corresponding to a chronological order that the change was made.” (column 13 lines 2-10, wherein a versioning module tracks chronological data)



As per claim 42, Multer teaches "In a computer network comprised of different types of platforms for storing replicas of the same data," (Figure 7 and column 8 lines 22-28, wherein information is shared between a plurality of devices) "and wherein the limitations or features of a particular platform may require the data of a replica to be stored in a different physical arrangement at the data store layer of the particular platform," (column 9 line 51 – column 10 line 23, wherein different types of devices mean different ways to store data) "and wherein when synchronizing the replicas the data for each replica must be mapped from the different physical arrangement at each platform into a logical view table of a synchronization layer of the particular platform that is substantially similar to the logical view table at each of the other different types of platforms," (column 12 lines 36-46, wherein data from different devices are converted to a universal data format) "a computer program product for implementing within the computer network a method for mapping of the physical layout of items in a data store layer of a platform to a logical view in a synchronization layer of the platform, the computer program product comprising a computer readable medium having stored thereon computer executable instructions for implementing the method," (see Abstract and column 5 lines 31-35)

"and wherein the method is comprised of: an act of compiling at the computer system of a particular platform a logical schema into a catalog that can be used to define a logical view that is substantially the same for each platform and that includes a logical grouping of data items by defining the data items in terms of," (Figure 11, 12, 13

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and column 37 lines 44-58, wherein a universal data format for objects is shown defining logical views)

“a charge unit that defines the granularity of a group of data items in the sense that if any part of the group of data items is modified, the entire group of data items will be synchronized when synchronizing other replicas;” (column 38 lines 10-23, wherein objects are divided into folders and supported in a data pack that is modified)

“and a consistency unit, defining the minimum group of data items that must be reported during synchronization if any item of the group is changed;” (column 39 lines 9-19, wherein all data packs have a header showing basic content information)

“and an act of utilizing the catalog to map items from a physical layout to the logical view that is substantially similar to the logical view at different platforms of one or more other computer systems.” (column 16 lines 33-50)

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Multer et al. (US Patent 7,007,041 B2) in view of Huang et al. (US Patent 6,393,434 B1).

As per claim 27, Multer is disclosed as per claim 26 above. Multer does not teach "the schema of one or more catalogs is in extensible mark-up language (XML)."

Huang teaches "the schema of one or more catalogs is in extensible mark-up language (XML)." (Figure 13 and column 14 line 66 – column 15 line 8, wherein a catalog of item groupings is written in xml).

It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Multer's method for providing a universal data format for synchronization between different devices with Huang's ability to represent data showing item groupings in XML. This gives the user added usability and compatibility when synchronizing data between devices, since XML is a widely used markup language. The motivation for doing so would be to synchronize data between devices in a dynamic manner and with fine-grained control (Huang column 4 lines 10-18).

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bodnar et al. (US Patent 6,295,541 B1)

Ramanujam et al. (US Publication 2003/0182327 A1)

Tsai et al. (Us Patent 7,039,656 B1)

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dangelino N. Gortayo whose telephone number is (571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dangelino N. Gortayo  
Examiner

Tim T. Vo  
SPE

A handwritten signature in black ink, appearing to read 'Tim Vo', with a long, sweeping horizontal line extending to the left.

TIM VO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100